



DEPARTMENT OF THE NAVY

NORTHERN DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
10 INDUSTRIAL HIGHWAY
MAIL STOP, #82
LESTER, PA 19113-2090

IN REPLY REFER TO

5090
Ser 2172/1823/FE

JUL 19 1994

Maine Department of Environmental Protection
Attn: Ms. Nancy Beardsley
Office of the Commissioner
State House, Station 17
Augusta, ME 04333

Subj: SOURCE INVESTIGATION WORK PLAN FOR SITE 9, NEPTUNE DRIVE
DISPOSAL SITE

Dear Ms. Beardsley:

As discussed at the Technical Review Committee meeting on June 23, 1994, the Navy has distributed a draft work plan for the upcoming field work at site 9. In summary, the work plan proposes to complete the following:

- a. Excavate 3 test pits to confirm/deny the existence of a separate landfill in the following general locations:
 - i. In the area East of Orion and West of Building 216,
 - ii. In the area between Building 216 and Building 217,
and
 - iii. In the area between Building 217 and Building 218.
- b. Excavate a trench to confirm/deny the existence of the drain pipe. The trench will be located East of Orion Street and West of Building 212.
- c. Following test pits and trenches, install three monitoring wells in the following general locations:
 - i. In the area East of Orion and West of Building 212 to monitor contaminants that may be migrating down the preferential pathway of the drain;
 - ii. In the area East of Orion and West of Building 216 to monitor groundwater from the flight line, and
 - iii. In the area of the Southeast corner of Building 216 as a new background location to replace MW-916.
- d. Install one soil boring in the area of T-23/MW-916 to obtain and analyze a soil sample.

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- e. Survey, sample, and obtain water level measurements at all wells at Site 9 and the Naval Exchange gas station to more accurately define the groundwater flow and the contaminants in the area.

As requested in our meeting on May 19, 1994, our responses to the recommendations in your letter of December 8, 1993, are attached. If you have any questions or wish to discuss any of the work or comments in more detail, please contact Mr. Fred Evans at 610-595-0567 x159 or Mr. Jim Caruthers at 207-921-2445.

Sincerely,



Frederick J. Evans
Remedial Project Manager
By direction of the Commanding Officer

Encl:

- (1) Response to Maine DEP Comments of December 8, 1993

Copy to:

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RESPONSE TO
MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION COMMENTS
DATED DECEMBER 8, 1993
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Comment 1: The Department recommends that all the existing monitoring wells at Site 9 be sampled immediately. All samples should be analyzed for all parameters. Selected monitoring wells upgradient of Site 9 should also be sampled. An improved groundwater sampling technique, like the "low-flow" method devised by Robert Puls, should be used for additional sampling, as vinyl chloride is very volatile and is easily lost from the sample. More reproducible inorganic results are also obtained by using this method. I believe that Fort Devens in Massachusetts is using this technique and this method has also been accepted for use at Loring Air Force Base in Limestone, Maine. The Department is available to assist the Navy in implementing this technique.

Response: The Navy will be conducting another source investigation at Site 9. As part of this investigation wells in the vicinity of Site 9 will be sampled for TCL VOCs, SVOCs and TAL Inorganics. Wells to be sampled include those previously sampled at Site 9, 10 wells installed under the Navy's UST program and 3 planned new wells. During sampling, closed-end bailers will be used to reduce volatility of Vinyl Chloride. Water level measurements will also be taken.

Comment 2: Review all available aerial photographs from 1941 through 1955, including photos available through the military, to determine potential upgradient sources of VOC's.

Response: Sets of aerial photographs from 1953, 1958 and 1978 have been obtained by the Navy. These photographs will be professionally reviewed to determine if additional areas need to be investigated.

Comment 3: Identify current and historic usage of all buildings within 2000 feet of Site 9 to determine potential sources of VOC's. A few sources that can be easily identified include the Motor Pool, the Exchange gas station, Auto Hobby Shop, and the flight line. Chlorinated solvents are known to be used on the flight line (Jordan, 1985). Investigations conducted at the gas station, located at the corner of Second street and Burbank, did not include sampling for chlorinated solvents. I suspect solvents have been used at the Motor Pool and Auto Hobby Shop. A thorough review of solvent usage at these and other buildings surrounding Site 9 must be completed. Based on the findings of this review, subsurface investigations may be required as part of this investigation.

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Response:

The Navy acknowledges ME DEP's concerns regarding a continuing source of groundwater contamination outside and upgradient of site 9. As requested, the Navy has reviewed the current and past operations in the area of Site 9 including those areas specified by the DEP. The only significant new information obtained is that a former auto hobby shop was located to the East of the existing family service center - building 27. Wells recently installed near the NEX gas station will determine if there has been an impact due to past operation of the old auto shop. In addition, 3 new wells are planned to compliment the existing monitoring well network at site 9. All wells including those near the NEX gas station will be sampled and analyzed for TCL VOCs, SVOCs and TAL Inorganics. If results of the upcoming sampling event indicate that there is a source outside of the Site 9 area, this will be pursued as a separate issue.

Comment 4:

Submit the package of information currently being compiled by the Navy addressing background inorganics concentrations, for review and approval of the Department.

Response:

The Navy understands this data package was sent to Maine DEP via ABB-ES' letter of December 7, 1993.

Comment 5:

Additional information in the upgradient direction is required to identify a new background location. The Department does not accept MW-916 as an appropriate background location. As stated in previous review comments, MW-916 is less than 20 feet from the delineated landfill boundary. Also, in light of new information regarding T-23, there is some fuel contamination within approximately 10 feet of MW-916. This sample is not sufficient to characterize the presence of fuel oil and/or landfill material.

Response:

The Navy understands the concerns regarding the proximity of MW-916 to the ash landfill however, please recognize that the analytical results show that groundwater samples taken from this location are free of contamination and therefore may be representative of background. Nevertheless, understanding the ME DEP's concerns regarding the proximity of MW-916 to the ash landfill and the associated fuel-type odors encountered at T-23, the Navy proposes to install and sample a new monitoring well in the vicinity of the southeast corner of Building 215, and perform a soil boring in the area T-23 and MW-916. One soil sample from this boring will be analyzed for TCL VOCs, SVOCs and TAL Inorganics.

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Comment 6: The Department has stated its position on the application of Human Health AWQC in previous review comments. The Department would like to schedule a meeting or a conference call with the Navy to further discuss this issue. Has the Navy determined the effect of the application of Human Health AWQC.

Response: The Maine Ambient Water Quality (AWQC) Criteria will be considered in future reports and discussions of data related to Site 9.

Comment 7: The Navy must provide copies of all field notes and boring logs taken during the course of the Site 9 investigations. I received a faxed copy of the boring log for MW-916, but I am still missing the field log for MW-916.

Response: Copies of all field notes and boring logs were sent to the DEP under ABB-ES' cover letter of December 7, 1993.

Comment 8: A test pit investigation should be performed in the area near T-7. The TerraProbe at T-7 hit an obstruction at 10 feet, which was never identified. The drain pipe may still be in place at that location. The drain pipe may be providing a preferential pathway for contamination from an upgradient source. The test pits will confirm whether the 42" drainpipe has actually been removed. Are there any construction plans available for the 42" drain pipe?

Response: No construction plans are available for the 42-inch drainpipe. This structure appears on a 1953 site map but does not appear on site maps from 1950 or 1957. A test pit in the area near T-7 is not advisable because of high voltage underground utilities. However, an area that would include the southern end of the former drainage line will be excavated during upcoming reconstruction at Neptune Drive. The Navy will keep the EPA and ME DEP advised of the construction schedule. Since this construction is almost certain to occur before the start of additional fieldwork at site 9, the information obtained during the excavation will be taken into consideration as part of the overall evaluation of site 9. In addition, the Navy also proposes to perform a test pit/trench West of Building 212 to confirm/deny the existence of the 42-inch drainpipe. One of the 3 proposed monitoring wells is also expected to be in the vicinity of a preferential path that would be created by the existence of a drainpipe.

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Comment 9: Is LT-901 sampling groundwater seeping out of the bank? Groundwater monitoring points should be installed at LT-901 in order to intercept groundwater contributing to LT-901.

Response: LT-901 is sampling groundwater seepage out of the bank. Therefore, an additional monitoring point here is not required. In addition, the Navy believes MW-903 which is in close proximity to LT-901 also characterizes the groundwater.

Comment 10: Based on referenced reports, Site 9 was reported to be in operation as a landfill from 1951 to approximately 1960. For a while it was the main Air Station disposal area. According to personnel interviews, it was used before operations began at Site 1 and typically only one disposal site was used at any given time. There is a conflicting report that Site 9 was used from 1943 to 1946 and from 1951 to 1952.

Response: The Navy agrees with your findings and the Feasibility Study which also points out the conflicting information on the landfill operation and waste characterization of the landfill. However, the Navy believes Site 9 could not have operated as a landfill after 1953 because the barracks were constructed on the site. The Navy has reviewed your additional comments and responds as follows:

Comment 10 A): Subsurface soil samples must be collected from within the landfill to determine the chemistry of the landfill material. TCLP tests must be performed on these samples.

Response: The Navy believes the extent and chemistry of the ash landfill has been adequately defined by the subsurface investigations and analytical results. TCLP analysis should not be required; existing monitoring wells provide actual chemical data on groundwater near the ash.

Comment 10 B): Subsurface soil samples at MW-914 must be collected to analyze the fuel oil soaked material described in the field notes.

Response: An additional soil boring at this location will be added to the work plan. However, the description of "fuel oil soaked" at boring 914 refers to the appearance of the soil - a qualitative description. The analytical data from groundwater samples taken from MW-914 do not indicate a fuel problem at this location.

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Comment 10 C): Subsurface soil samples must be collected in the vicinity of T-23 and MW-916. Samples are required to assess the petroleum contaminated soils in this area.

Response: The Navy agrees to perform a soil boring in the vicinity of T-23/MW 916 and collect a soil sample for analysis.

Comment 10 D): Groundwater samples should be collected from within the landfill to determine the effectiveness of the existing monitoring well network. Groundwater sampling will also be used to determine the nature of the hydrocarbon sheen noted to be present during past subsurface investigations.

Response: The Navy proposes to sample all wells at site 9 and 10 additional wells at the NEX gas station. Included in this sampling event will be MW-915 which is located within the boundaries of the ash landfill.

Comment 10 E): Groundwater samples should be collected at deeper intervals in the vicinity of the existing monitoring wells.

Response: In previous comments to the Navy the ME DEP has suggested deeper wells in a search for a sinking free product or Dense Non-Aqueous Phase Liquid (DNAPL). The Navy does not agree that deeper monitoring wells are necessary. The concentrations of chlorinated solvents found at Site 9 are orders of magnitude below levels indicative of a sinking free product.

Comment 10 F): Please provide the reference in the IAS that states that the site history involved only sporadic dumping of very small quantities of solvents at Site 9 (Navy Response to TRC Comments, 11/30/93).

Response: This was not reported in the IAS. Appropriate changes have been made to the Site 9 Technical Memorandum.

Blind copies:

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~~Ms. Elizabeth R. Walter~~ ABB-ES